

ABSTRACT OF THE DISCLOSURE

A photon operating device is capable of more effectively using five senses and muscular or other functions humans have, and capable of performing various kinds of information processing as high-level interface connecting image information of natural worlds and human brains. The photon operating device comprises a plurality of first optical fibers, a plurality of second optical fibers, which both are arranged in form of a grating on a two-dimensional plane, semiconductor lasers and CCD line sensors, which both are disposed at one-side ends and the other ends of the first optical fibers, respectively. A photon beam introduced from a light source into one end of a selected first optical fiber is divided into two correlated dual signals, i.e. a first signal traveling through the selected first optical fiber and a second signal led out from the selected first optical fiber externally of the two-dimensional plane, at an intersection between the first and second optical fibers by an optical switch. The first signal led out from the other end of the selected first optical fiber is detected by a CCD line sensor.